

## The Synthesized Warren Buffett Lecture on Bonds

(Bud Labitan pieced this together as a personal study on bonds. It is presented as a holiday present for fellow Yellow BRKers Club members online. It is composed of selected bond sections from Warren Buffett's letters to shareholders, and it is intended to highlight Warren Buffett's views on bond investing. Labitan edited it mainly for "past-tense" transitions.)

Investing in **bonds** and investing in stocks are alike in certain ways: Both activities require us to make a price-value calculation and also to scan hundreds of securities to find the very few that have attractive reward/risk ratios. An investor cannot obtain superior profits from stocks by simply committing to a specific investment category or style. He or she can earn them only by carefully evaluating facts and continuously exercising discipline.

In The Theory of Investment Value, John Burr Williams described the equation for value condensed here. The value of any stock, **bond**, or business today is determined by the cash inflows

and outflows, discounted at an appropriate interest rate, that can be expected to occur during the remaining life of the asset.

Note that the formula is the same for stocks as it is for **bonds**. Even so, there is an important, and difficult to deal with, difference between the two. A **bond** has a coupon and maturity date that define future cash flows; but in the case of equities, the investment analyst must himself estimate the "future coupons." Furthermore, the quality of management affects the **bond** coupon only rarely - chiefly when management is so inept or dishonest that payment of interest is suspended. In contrast, the ability of management can dramatically affect the "equity coupons."

The investment shown by the discounted-flows-of-cash calculation to be the cheapest is the one that the investor should purchase. Irrespective of whether the business grows or doesn't, displays volatility or smoothness in its earnings, or carries a high price or low in relation to its current earnings and book value, the cheapest investment shown by the discounted-flows-of-cash is the one that the investor should purchase.

Investing in junk **bonds** and investing in stocks are alike in that both activities require us to make a price-value calculation. And, both activities require us to scan hundreds of securities to find the very few that have attractive reward/risk ratios. But there are important differences between the two disciplines as well. In stocks, we expect every

commitment to work out well because we concentrate on conservatively financed businesses with strong competitive strengths, run by able and honest people. If we buy into these companies at sensible prices, losses should be rare. When purchasing junk **bonds**, we are dealing with enterprises that are far more marginal. These businesses are usually overloaded with debt and often operate in industries characterized by low returns on capital. Additionally, the quality of management is sometimes questionable.

Management may even have interests that are counter to those of debtholders. Therefore, we expect that we will have occasional large losses in junk issues. So far, however, we have done reasonably well in this field.

Although the value equation has usually shown equities to be cheaper than **bonds**, that result is not inevitable. When **bonds** are calculated to be the more attractive investment, they should be bought. We prefer to invest in equity securities or to acquire entire businesses based upon the principles discussed in the section on equity price risk. When unable to do so, our management may alternatively invest in **bonds**, loans or other interest rate sensitive instruments.

In 2002, we were able to make sensible investments in a few "junk" **bonds** and loans. When we are unable to invest in equity securities or to acquire entire businesses, our management may alternatively invest in **bonds**, loans or other interest

rate sensitive instruments.

We love owning common stocks if they can be purchased at attractive prices. In my many years of investing, 50 or so years have offered that kind of equity buying opportunity. And, there will be years like that again. Unless we see a very high probability of at least 10% pre-tax returns (which translate to 6½-7% after corporate tax), we will sit on the sidelines. With short-term money returning less than 1% after-tax, sitting it out is no fun. But occasionally successful investing requires inactivity.

We prefer to invest in equity securities or to acquire entire businesses based upon these principles that reduce the price risk, and provide us with a margin of safety. When buying companies or common stocks, we look for understandable first-class businesses that have sustainable competitive advantages accompanied by first-class managements. We have a corporate policy of reinvesting earnings for growth, diversity and strength. This policy of reinvestment provides the incidental effect of minimizing the current imposition of taxes on our owners. When we are unable to invest in equity securities or to acquire entire businesses, our management may alternatively invest in **bonds**, loans or other interest rate sensitive instruments. Thus, in 2002, we made some sensible investments in a few "junk" **bonds** and loans. Keep in mind that our strategy is to acquire securities that are attractively priced in

relation to the perceived credit risk. We recognize and accept that losses may occur. Berkshire has historically utilized a modest level of corporate borrowings and debt. Further, we strive to maintain the highest credit ratings so that the cost of debt is minimized. Berkshire utilizes derivative products to manage interest rate risks to a very limited degree.

Leaving the question of price aside, the best business to own is one that over an extended period can employ large amounts of incremental capital at very high rates of return. The worst business to own is one that must do the opposite. That bad business consistently employs ever-greater amounts of capital at very low rates of return.

Unfortunately, the first type of business is very hard to find: Most high-return businesses need relatively little capital. Shareholders of such a good business usually would benefit if it pays out most of its earnings in dividends or makes significant stock repurchases.

The investment shown by the discounted-flows-of-cash calculation to be the cheapest is the one that the investor should purchase. The mathematical calculations required to evaluate securities are not difficult. However, an analyst - even one who is experienced and intelligent - can easily go wrong in estimating future "coupons." At Berkshire, we attempt to deal with this problem in two ways. First, we try to stick to businesses we believe we understand. That means they must be relatively simple and stable in character. If a business is

complex or subject to constant change, we're not smart enough to predict future cash flows. That shortcoming doesn't bother us. What counts for most people in investing is not how much they know, but rather how realistically they define what they don't know. An investor needs to do very few things right as long as he or she avoids big mistakes. Second, and equally important, we insist on a margin of safety in our purchase price. If we calculate the value of a common stock to be only slightly higher than its price, we're not interested in buying. We believe this margin-of-safety principle, so strongly emphasized by Ben Graham, to be the cornerstone of investment success.

Charlie and I learned that time is the friend of the wonderful business, the enemy of the mediocre. We believe that it's far better to buy a wonderful company at a fair price than a fair company at a wonderful price. Charlie understood this early and I was a slow learner. When buying companies or common stocks, we look for first-class businesses accompanied by first-class managements. We practice a corporate policy of reinvesting earnings for growth, diversity and strength, which has the incidental effect of minimizing the current imposition of explicit taxes on our owners. However, during periods of inflation, you can be subjected to the implicit inflation tax, and when you wish to transfer your investment in Berkshire into another form of investment, or into consumption, you also would

face explicit taxes.

Here is a little history lesson. Probably no business in America changed hands in 1946 at book value that the buyer believed lacked the ability to earn more than 1% on book. But investors with **bond**-buying habits eagerly made economic commitments throughout the year on that basis. Similar conditions prevailed for the next two decades as **bond** investors happily signed up for twenty or thirty years on terms outrageously inadequate by business standards.

An investor cannot obtain superior profits from stocks by simply committing to a specific investment category or style. He can earn them only by carefully evaluating facts and continuously exercising discipline. Investing in arbitrage situations, per se, is no better a strategy than selecting a portfolio by throwing darts. Common stocks are the most fun. When conditions are right that is, when companies with good economics and good management sell well below intrinsic business value - stocks sometimes provide grand-slam home runs. We often find no equities that come close to meeting our tests. We do not predict markets, we think of the business. We have no idea whether the market is going to go up, down, or sideways in the near- or intermediate term future.

In contrast to the equity universe, the **bond** universe is dissimilar in several vital respects. For openers, the manager of a fallen angel almost invariably yearned to regain investment-grade

status and worked toward that goal. The junk-**bond** operator was usually an entirely different breed. Behaving much as a heroin user might, he devoted his energies not to finding a cure for his debt-ridden condition, but rather to finding another fix.

Additionally, the fiduciary sensitivities of the executives managing the typical fallen angel were often more finely developed than were those of the junk-**bond**-issuing financiopath. Wall Street's enthusiasm for an idea was proportional not to its merit, but rather to the revenue it would produce. Mountains of junk **bonds** were sold by those who didn't care to those who didn't think - and there was no shortage of either.

When the leveraged buy-out raze began some years back, purchasers could borrow only on a reasonably sound basis. Conservatively-estimated free cash flow is defined as: operating earnings plus depreciation and amortization less normalized capital expenditures. Conservatively-estimated free cash flow should be adequate to cover both interest and modest reductions in debt.

As the adrenalin of deal-makers surged, businesses began to be purchased at prices so high that all free cash flow had to be allocated to the payment of interest. That left nothing for the paydown of debt. In effect, a Scarlett O'Hara "I'll think about it tomorrow" position in respect to principal payments was taken by borrowers and accepted by a new breed of lender, the buyer of original-issue junk **bonds**. Debt now became

something to be refinanced rather than repaid. The change brings to mind a New Yorker cartoon in which the grateful borrower rises to shake the hand of the bank's lending officer and gushes: "I don't know how I'll ever repay you."

Soon borrowers found even the new lax standards, intolerably binding. To induce lenders to finance even sillier transactions, they introduced an abomination, EBDIT - Earnings Before Depreciation, Interest and Taxes - as the test of a company's ability to pay interest. Using this sawed-off yardstick, the borrower ignored depreciation as an expense on the theory that it did not require a current cash outlay. Such an attitude is clearly delusional.

Junk **bonds** remain a mine field, even at prices that are often a small fraction of issue price. We have never bought a new issue of a junk **bond**. We are, however, willing to look at the field, when it is in disarray. In the case of RJR Nabisco, we felt that the Company's credit was considerably better than was generally perceived for a while and that the yield we received, as well as the potential for capital gain, more than compensated for the risk we incurred (though that was far from nil). RJR made asset sales at favorable prices, added major amounts of equity, and in general was being run well. However, as we surveyed the field, most low-grade **bonds** still looked unattractive. The handiwork of the Wall Street of the 1980s was even worse than we had thought. Many important

businesses were mortally wounded. We will, though, keep looking for opportunities as junk markets unravel.

The economic case justifying equity investment is that, in aggregate, additional earnings above passive investment returns on fixed-income securities, would be derived through the employment of managerial and entrepreneurial skills in conjunction with that equity capital. Furthermore, the case says that since the equity capital position is associated with greater risk than passive forms of investment, it is “entitled” to higher returns.

A “value-added” bonus from equity capital seems natural and certain. But is it? Several decades back, a return on equity of as little as 10% enabled a corporation to be classified as a “good” business - i.e., one in which a dollar reinvested in the business logically could be expected to be valued by the market at more than one hundred cents. For, with long-term taxable **bonds** yielding 5% and long-term tax-exempt **bonds** 3%, a business operation that could sensibly utilize equity capital at 10% clearly was worth some premium to investors over the equity capital employed. That was true even though a combination of taxes on dividends and on capital gains would reduce the 10% earned by the corporation to perhaps 6%-to-8% in the hands of the individual investor. Investment markets recognized this truth. During that earlier period, American business earned an

average of 11% or so on equity capital employed and stocks, in aggregate, sold at valuations far above that equity capital (book value), averaging over 150 cents on the dollar. Most businesses were “good” businesses because they earned far more than the return on long-term passive money. The value-added produced by equity investment, in aggregate, was substantial. That day is gone.

The lessons learned during its existence are difficult to discard. While investors and managers must place their feet in the future, their memories and nervous systems often remain plugged into the past. It is much easier for investors to utilize historic p/e ratios or for managers to utilize historic business valuation yardsticks than it is for either group to rethink their premises daily. When change is slow, constant rethinking is actually undesirable; it achieves little and slows response time. When change is great, yesterday’s assumptions can be retained only at great cost. And, the pace of economic change has become breathtaking.

During past years, when long-term taxable **bond** yields exceeded 16% and long-term tax-exempts 14%, the total return achieved from such tax-exempts went directly into the pocket of the individual owner. Meanwhile, American business was producing earnings of only about 14% on equity. This 14% would be substantially reduced by taxation before it can be banked by the individual owner. The extent of such shrinkage depends upon the dividend policy of the

corporation and the tax rates applicable to the investor. With interest rates on passive investments at late 1981 levels, a typical American business was no longer worth one hundred cents on the dollar to individual owners. If the business is owned by pension funds or other tax-exempt investors, the arithmetic, although still unenticing, changes substantially for the better. Assume an investor in a 50% tax bracket; if our typical company pays out all earnings, the income return to the investor would be equivalent to that from a 7% tax-exempt **bond**. If conditions persisted, if all earnings were paid out, and return on equity stays at 14%, the 7% tax-exempt equivalent to the higher-bracket individual investor is just as frozen as is the coupon on a tax-exempt **bond**. Such a perpetual 7% tax-exempt **bond** might be worth fifty cents on the dollar.

If, on the other hand, all earnings of our typical American business are retained and return on equity again remains constant, earnings would grow at 14% per year. If the p/e ratio remains constant, the price of our typical stock would also grow at 14% per year. That 14% is not yet in the pocket of the shareholder. Putting it there would require the payment of a capital gains tax, which was assessed at a maximum rate of 20% when this was written. This net return, works out to a poorer rate of return than the currently available passive after-tax rate. During periods when passive rates exceed equity return rates, unless passive rates fall, companies

achieving 14% per year gains in earnings per share while paying no cash dividend are an economic failure for their individual shareholders. During such time periods, the returns from passive capital outstrip the returns from active capital. This is an unpleasant fact for both investors and corporate managers and, therefore, one they may wish to ignore. But, facts do not cease to exist, either because they are unpleasant or because they are ignored.

In the past most American businesses paid out a significant portion of their earnings and thus fell between the two examples. And most American businesses were “bad” businesses economically - producing less for their individual investors after-tax than the tax-exempt passive rate of return on money. Some high-return businesses still remained attractive, even under such conditions. But, American equity capital, in aggregate, produces no value-added for individual investors. It should be stressed that this depressing situation does not occur because corporations are jumping, economically, less high than previously. In fact, they are jumping somewhat higher: return on equity has improved a few points in the past decade. But, the crossbar of passive return had been elevated much faster. Unhappily, there are few industries in which the prospects seem bright for substantial gains in return on equity.

Inflationary experience and expectations would be major (but not the only) factors affecting the

height of the crossbar in future years. If the causes of long-term inflation are tempered, passive returns fall and the intrinsic position of American equity capital significantly improve. Many businesses that are classified as economically “bad” are restored to the “good” category under such low inflation circumstances. A further punishment is inflicted by an inflationary environment upon the owners of the “bad” business. To continue operating in its mode, such a low-return business usually must retain much of its earnings, no matter what penalty such a policy produces for shareholders.

Reason would prescribe just the opposite policy. An individual, stuck with a 5% **bond** with many years to run before maturity, does not take the coupons from that **bond** and pay one hundred cents on the dollar for more 5% **bonds** if similar **bonds** are available at forty cents on the dollar. Instead, he takes those coupons from his low-return **bond** and - if inclined to reinvest - looks for the highest return with safety currently available. Good money is not thrown after bad. What makes sense for the **bond**holder makes sense for the shareholder. Logically, a company with historic and prospective high returns on equity should retain much or all of its earnings so that shareholders can earn premium returns on enhanced capital. Conversely, low returns on corporate equity would suggest a very high dividend payout so that owners could direct capital toward more attractive areas.

When prices continuously rise, the “bad”

business must retain every nickel that it can. Not because it is attractive as a repository for equity capital, but precisely because it is so unattractive, the low-return business must follow a high retention policy. If it wishes to continue operating in the future as it has in the past, it simply has no choice.

Inflation acts as a gigantic corporate tapeworm. That tapeworm preemptively consumes its requisite daily diet of investment dollars regardless of the health of the host organism. Whatever the level of reported profits (even if nil), more dollars for receivables, inventory and fixed assets are continuously required by the business in order to merely match the unit volume of the previous year. The less prosperous the enterprise, the greater the proportion of available sustenance claimed by the tapeworm. A business earning 8% or 10% on equity often has no leftovers for expansion, debt reduction or “real” dividends. The tapeworm of inflation simply cleans the plate. The low-return company’s inability to pay dividends, understandably, is often disguised. Corporate America increasingly is turning to dividend reinvestment plans, sometimes even embodying a discount arrangement that all but forces shareholders to reinvest. Other companies sell newly issued shares to Peter in order to pay dividends to Paul. Beware of “dividends” that can be paid out only if someone promises to replace the capital distributed.

Berkshire continues to retain its earnings for offensive, not defensive or obligatory, reasons. In no way are we immune from the pressures that escalating passive returns exert on equity capital. We continue to clear the crossbar of after-tax passive return, but barely. Our historic 21% return - not at all assured for the future - still provided, after the current capital gain tax rate, a modest margin over the inflationary after-tax rates on passive money. It would be a bit humiliating to have our corporate value-added turn negative. But, it can happen here as it has elsewhere, either from events outside anyone's control or from poor relative adaptation on our part.

Let's assume that an investor owns a risk-free 10% perpetual **bond** with one very unusual feature. Each year the investor can elect either to take his 10% coupon in cash, or to reinvest the coupon in more 10% **bonds** with identical terms; i.e., a perpetual life and coupons offering the same cash-or-reinvest option. If, in any given year, the prevailing interest rate on long-term, risk-free **bonds** is 5%, it would be foolish for the investor to take his coupon in cash since the 10% **bonds** he could instead choose would be worth considerably more than 100 cents on the dollar. Under these circumstances, the investor wanting to get his hands on cash should take his coupon in additional **bonds** and then immediately sell them. By doing that, he would realize more cash than if he had taken his coupon directly in cash. Assuming all **bonds** were

held by rational investors, no one would opt for cash in an era of 5% interest rates, not even those **bond**holders needing cash for living purposes.

In September of 1989, Berkshire issued \$902.6 million principal amount of Zero-Coupon Convertible Subordinated Debentures and listed them on the New York Stock Exchange. Salomon Brothers handled the underwriting in superb fashion. Most **bonds**, require regular payments of interest, usually semi-annually. A zero-coupon **bond**, conversely, requires no current interest payments; instead, the investor receives his yield by purchasing the security at a significant discount from maturity value. The effective interest rate is determined by the original issue price, the maturity value, and the amount of time between issuance and maturity. The **bonds** were issued at 44.314% of maturity value and are due in 15 years. For investors purchasing the **bonds**, that is the mathematical equivalent of a 5.5% current payment compounded semi-annually. Because we received only 44.31 cents on the dollar, our proceeds from this offering were \$400 million (less about \$9.5 million of offering expenses).

The **bonds** were issued in denominations of \$10,000 and each **bond** was convertible into .4515 shares of Berkshire Hathaway. Because a \$10,000 **bond** cost \$4,431, this means that the conversion price was \$9,815 per Berkshire share, a 15% premium to the market price then existing. Berkshire could call the **bonds** at any time after

September 28, 1992 at their accreted value (the original issue price plus 5.5% compounded semi-annually) and on two specified days, September 28 of 1994 and 1999, the **bondholders** could require Berkshire to buy the securities at their accreted value.

For tax purposes, Berkshire is entitled to deduct the 5.5% interest accrual each year, even though we make no payments to the **bondholders**. Thus the net effect to us, resulting from the reduced taxes, was positive cash flow. That is a very significant benefit. Some unknowable variables prevent us from calculating our exact effective rate of interest, but under all circumstances it will be well below 5.5%. There is meanwhile a symmetry to the tax law: Any taxable holder of the **bonds** must pay tax each year on the 5.5% interest, even though he receives no cash.

Neither our **bonds** nor those of certain other companies that issued similar **bonds** resemble the great bulk of zero-coupon **bonds** that have been issued in recent years. Of these, Charlie and I have been, and will continue to be, outspoken critics. Such **bonds** have often been used in the most deceptive of ways and with deadly consequences to investors.

If you're my age you bought your first zero-coupon **bonds** during World War II, by purchasing the famous Series E U. S. Savings **Bond**, the most widely-sold **bond** issue in history. (After the war, these **bonds** were held by one out of two U. S.

households.) Nobody called the Series E a zero-coupon **bond**, a term in fact that I doubt had been invented. But that's precisely what the Series E was. These **bonds** came in denominations as small as \$18.75. That amount purchased a \$25 obligation of the United States government due in 10 years, terms that gave the buyer a compounded annual return of 2.9%. At the time, this was an attractive offer: the 2.9% rate was higher than that generally available on Government **bonds** and the holder faced no market-fluctuation risk, since he could at any time cash in his **bonds** with only a minor reduction in interest.

A second form of zero-coupon U. S. Treasury issue, also benign and useful, surfaced in the last decade. One problem with a normal **bond** is that even though it pays a given interest rate - say 10% - the holder cannot be assured that a compounded 10% return will be realized. For that rate to materialize, each semi-annual coupon must be reinvested at 10% as it is received. If current interest rates are, say, only 6% or 7% when these coupons come due, the holder will be unable to compound his money over the life of the **bond** at the advertised rate. For pension funds or other investors with long-term liabilities, "reinvestment risk" of this type can be a serious problem. Savings **Bonds** might have solved it, except that they are issued only to individuals and are unavailable in large denominations. What big buyers needed was huge quantities of "Savings **Bond** Equivalents."

Enter some ingenious and, in this case, highly useful investment bankers (led by Salomon Brothers). They created the instrument desired by "stripping" the semi-annual coupons from standard Government issues. Each coupon, once detached, takes on the essential character of a Savings **Bond** since it represents a single sum due sometime in the future. For example, if you strip the 40 semi-annual coupons from a U. S. Government **Bond** due in the year 2010, you will have 40 zero-coupon **bonds**, with maturities from six months to 20 years, each of which can then be bundled with other coupons of like maturity and marketed. If current interest rates are, say, 10% for all maturities, the six-month issue will sell for 95.24% of maturity value and the 20-year issue will sell for 14.20%. The purchaser of any given maturity is thus guaranteed a compounded rate of 10% for his entire holding period. Stripping of government **bonds** has occurred on a large scale in recent years, as long-term investors, ranging from pension funds to individual IRA accounts, recognized these high-grade, zero-coupon issues to be well suited to their needs.

But as happens in Wall Street all too often, what the wise do in the beginning, fools do in the end. In the last few years zero-coupon **bonds** (and their functional equivalent, pay-in-kind **bonds**, which distribute additional PIK **bonds** semi-annually as interest instead of paying cash) have been issued in enormous quantities by ever-junkier credits. To

these issuers, zero (or PIK) **bonds** offer one overwhelming advantage: It is impossible to default on a promise to pay nothing. Indeed, if Least Developed Country (LDC) governments had issued no debt in the 1970's other than long-term zero-coupon obligations, they would now have a spotless record as debtors.

This principle at work - that you need not default for a long time if you solemnly promise to pay nothing for a long time - has not been lost on promoters and investment bankers seeking to finance ever-shakier deals. Its acceptance by lenders took a while. When the leveraged buy-out craze began some years back, purchasers could borrow only on a reasonably sound basis, in which conservatively-estimated free cash flow - that is, operating earnings plus depreciation and amortization less normalized capital expenditures - was adequate to cover both interest and modest reductions in debt.

To induce lenders to finance even sillier transactions, they introduced an abomination, EBDIT - Earnings Before Depreciation, Interest and Taxes - as the test of a company's ability to pay interest. At 95% of American businesses, capital expenditures that over time roughly approximate depreciation are a necessity and are every bit as real an expense as labor or utility costs. Even a high school dropout knows that to finance a car he must have income that covers not only interest and operating expenses, but also realistically-calculated

depreciation. He would be laughed out of the bank if he started talking about EBDIT.

Capital outlays at a business can be skipped in any given month, just as a human can skip a day or even a week of eating. If the skipping becomes routine and is not made up, the body weakens and eventually dies. Furthermore, a start-and-stop feeding policy will over time produce a less healthy organism, human or corporate, than that produced by a steady diet. As businessmen, Charlie and I relish having competitors who are unable to fund capital expenditures.

You might think that waving away a major expense such as depreciation in an attempt to make a terrible deal look like a good one hits the limits of Wall Street's ingenuity. If so, you haven't been paying attention during the past few years. Promoters needed to find a way to justify even pricier acquisitions. Otherwise, they risked - heaven forbid! - losing deals to other promoters with more "imagination."

So, stepping through the Looking Glass, promoters and their investment bankers proclaimed that EBDIT should now be measured against cash interest only, which meant that interest accruing on zero-coupon or PIK **bonds** could be ignored when the financial feasibility of a transaction was being assessed. This approach not only relegated depreciation expense to the let's-ignore-it corner, but gave similar treatment to what was usually a significant portion of interest expense. To their

shame, many professional investment managers went along with this nonsense, though they usually were careful to do so only with clients' money, not their own. (Calling these managers "professionals" is actually too kind; they should be designated "promotees.") Under this new standard, a business earning, say, \$100 million pre-tax and having debt on which \$90 million of interest must be paid currently, might use a zero-coupon or PIK issue to incur another \$60 million of annual interest that would accrue and compound but not come due for some years. The rate on these issues would typically be very high, which means that the situation in year 2 might be \$90 million cash interest plus \$69 million accrued interest, and so on as the compounding proceeds. Such high-rate reborrowing schemes, which a few years ago were appropriately confined to the waterfront, soon became models of modern finance at virtually all major investment banking houses.

Some time ago Ken Galbraith, in his witty and insightful *The Great Crash*, coined a new economic term: "the bezzle," defined as the current amount of undiscovered embezzlement. This financial creature has a magical quality: The embezzlers are richer by the amount of the bezzle, while the embezzlees do not yet feel poorer. Professor Galbraith astutely pointed out that this sum should be added to the National Wealth so that we might know the Psychic National Wealth. Logically, a society that wanted to feel enormously prosperous would both encourage

its citizens to embezzle and try not to detect the crime. By this means, "wealth" would balloon though not an erg of productive work had been done. The satirical nonsense of the bezzle is dwarfed by the real-world nonsense of the zero-coupon **bond**. With zeros, one party to a contract can experience "income" without his opposite experiencing the pain of expenditure. In our illustration, a company capable of earning only \$100 million dollars annually - and therefore capable of paying only that much in interest - magically creates "earnings" for **bondholders** of \$150 million. As long as major investors willingly don their Peter Pan wings and repeatedly say "I believe," there is no limit to how much "income" can be created by the zero-coupon **bond**.

Wall Street welcomed this invention with the enthusiasm less-enlightened folk might reserve for the wheel or the plow. Here, finally, was an instrument that would let the Street make deals at prices no longer limited by actual earning power. The result, obviously, would be more transactions: Silly prices will always attract sellers. The zero-coupon or PIK **bond** possesses one additional attraction for the promoter and investment banker, which is that the time elapsing between folly and failure can be stretched out. This is no small benefit. If the period before all costs must be faced is long, promoters can create a string of foolish deals - and take in lots of fees - before any chickens come home to roost from their earlier ventures.

In the end, alchemy, whether it is metallurgical or financial, fails. A base business can not be transformed into a golden business by tricks of accounting or capital structure. The man claiming to be a financial alchemist may become rich. But gullible investors rather than business achievements will usually be the source of his wealth.

Whatever their weaknesses, many zero-coupon and PIK **bonds** will not default. We have in fact owned some and may buy more if their market becomes sufficiently distressed. We've not, however, even considered buying a new issue from a weak credit. No financial instrument is evil per se; it's just that some variations have far more potential for mischief than others. The blue ribbon for mischief-making should go to the zero-coupon issuer unable to make its interest payments on a current basis. Our advice: Whenever an investment banker starts talking about EBDIT - or whenever someone creates a capital structure that does not allow all interest, both payable and accrued, to be comfortably met out of current cash flow net of ample capital expenditures - zip up your wallet.

During 2002, Berkshire increased its investments in high-yield corporate **bonds** to approximately \$8 billion at December 31, 2002. Approximately \$7 billion of these investments are held by Berkshire insurance subsidiaries with the remaining portion held by finance subsidiaries. These investments were primarily acquired at distressed prices. The credit risk associated with

these investments is much greater than with other fixed income investments, which are generally U.S. Government, municipal and mortgage-backed securities. Approximately \$4 billion of these investments were issued by companies in the energy industry and approximately \$2 billion were issued by telecommunications businesses.

Berkshire believes that credit losses may eventually occur with respect to some of these investments.

However, the Company also believes that over time these investments would produce reasonable returns in relation to credit risk.

First, in 2002 there was no megacatastrophe, which means that Berkshire (and other insurers as well) earned more from insurance than if losses had been normal. Losses will forever be part of the insurance business, and they will forever be paid with shareholders' money. Nonetheless, for the purposes of this exercise, we'll take a page from the industry's book. For last year, when we didn't have any truly major disasters, a downward adjustment is appropriate if you wish to "normalize" our underwriting result. Secondly, the **bond** market in 2002 favored certain strategies we employed in our finance and financial products business. Gains from those strategies would certainly diminish within a year or two and may well disappear.